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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Applicants: David F. Mears, *et al.*

Examiner: Iqbal, Khawar

Serial No.: 09/822,064

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Group Art: 2686

Atty. Docket: 068448-174

For: Parasitic Radio Transmission System

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APPELLANT'S BRIEF UNDER 37 CFR 41.10

This brief is in furtherance of the Notice of Appeal filed in this application on December 3, 2004. This brief also corrects the issues raised in the Notification of Non-Compliant Appeal Brief dated April 16, 2005.

1. REAL PARTY IN INTEREST - 37 CFR 41.37(c)(1)(i)

The real party in interest in the present Appeal is the assignee of record of the present application, Com-Net Ericsson Critical Radio Systems, Inc, or any successor to said corporate assignee.

2. RELATED APPEALS AND INTERFERENCES - 37 CFR 41.37(c)(1)(ii)

To the best of our knowledge, there is no other appeal, interference or judicial proceeding that is related to or that will directly affect, or that will be directly affected by, or that will have a bearing on the Board's decision in this Appeal.

3. STATUS OF CLAIMS - 37 CFR 41.37(c)(1)(iii)

Claims cancelled: 17.

Claims withdrawn but not cancelled: none.

Claims pending: 1-16 and 18-22.

Claims allowed: none.

Claims rejected: 1-16 and 18-22.

Claim rejections appealed: 1-16 and 18-22.

4. STATUS OF AMENDMENTS - 37 CFR 41.37(c)(1)(iv)

There is no amendment filed subsequent to final rejection. However, Appellant notes the existence of a typographical error in connection with claim 18 that shows dependency from claim 17, a cancelled claim. The proper dependency of claim 18 should be from claim 5. For purposes of this appeal, this error has no bearing but should be corrected upon allowance of claims.

5. SUMMARY OF CLAIMED SUBJECT MATTER- 37 CFR 41.37(c)(1)(v)

The present invention generally relates to a trunk radio system. In a typical trunk radio system that is used by emergency and public service organizations, the capacity of that system to handle calls is generally over specified, i.e., the number of channels or frequencies designed in the system is greater than the expected number of simultaneous users of the trunk radio system. See paragraph 8 of the publication document for the present application. This characteristic increases the likelihood that no calls for user service will be blocked due to channel unavailability. Since the channel capacity of the system is over specified, at any given time, one may find some frequencies

or channels that are not in use by the system. The present invention is specifically intended to utilize these unused channels to carry communications from sources outside the emergency and public service organizations. These outside users comprise relatively low priority digital data services that are described in applicant's specification as *parasitic users*, i.e., users who can utilize available channels or frequencies in the system when those channels or frequencies are not otherwise being required by the traditional system users. See for example paragraph 11 of the publication document for the present application. It is specifically noted that because these are outside users, any traditional user of the trunked communication system, i.e., the emergency or public service users, have priority over the parasitic users. Thus, this system as described and claimed by applicant is not just directed to functions within the normal user configuration of trunk radio systems. In applicant's invention, any traditional member of the emergency or public safety group has higher priority relative to the parasitic users and can interrupt any transmission that is being utilized to transmit what applicant has described as *parasitic data* from outside resources.

#### Claim 1

Independent claim 1 is directed to a communications system 40 for transmitting information signals to a first plurality of receivers 42 upon request, and for transmitting parasitic data to a second plurality of receivers 44. See paragraph 20 and FIG. 2 of the publication document for the present application. The communications system comprises a transmitter 100 for transmitting an information signal to at least one of the first plurality of receivers on an assigned frequency selected from among a plurality of available frequencies, in response to a request to transmit received from a user of the communications system. See paragraph 36 and FIG. 5 of the publication document for the present application. The communications system further comprises a controller 126 coupled to the transmitter for transmitting parasitic data to at least one of the second plurality of receivers on a heretofore unoccupied frequency selected from among the plurality of available frequencies, and wherein the parasitic data transmission is

interrupted if the selected frequency is required for transmitting an information signal to one of the first plurality of receivers. See paragraphs 29, 30 and 32 and FIGS. 3 and 4 of the publication document for the present application.

#### Claim 5

Independent claim 5 is directed to a trunked radio repeater system 40 including a trunked radio repeater 20 and a plurality of portable radios 42 for communicating bi-directionally with each other via the trunked radio repeater. The trunked radio repeater system further includes plural working channels 50, 52. The trunked radio repeater system further includes a plurality of parasitic receivers 44 operating on a secondary basis to the plurality of portable radios. See paragraph 20 and FIG. 2 of the publication document for the present application. The trunked radio repeater system comprises a first controller 106 for receiving a request from one of the plurality of portable radios to transmit an information signal to at least one other of the plurality of portable radios, and in response thereto for assigning a working channel to carry the information signal. See paragraph 37 and FIG. 5 of the publication document for the present application. A second controller 126 is responsive to the first controller for transmitting parasitic data to one or more of the plurality of parasitic receivers on an unoccupied working channel. See paragraph 37 and FIG. 5 of the publication document for the present application. When the first controller assigns a working channel that is in use transmitting parasitic data, the first controller terminates the parasitic data transmission and transmits an information signal on the working channel. See paragraphs 29, 30 and 32 and FIGS. 3 and 4 of the publication document for the present application.

#### Claim 19

Independent claim 19 is directed to a method for operating a trunked radio repeater system 40 having a control channel 54, 56 and plural working channels 50, 52, wherein the working channels are assigned for use by one or more of a first plurality of radios 42 as specified by a control signal carried on the control channel and assigned for use by a second plurality of radios 44 when not in use by one of the first plurality of radios. See paragraph 20 and FIGS. 2-4 of the

publication document for the present application. The method comprises operating one or more of the first plurality of radios on one of the plural working channels in response to an assignment signal carried on the control channel. The method further comprises determining when a working channel is unoccupied, and permitting operation of one or more of the second plurality of radios 44 on an unoccupied working channel until the working channel is assigned for use by the first plurality of radios. See paragraphs 26, 29, 30 and 32 and FIGS. 3 and 4 of the publication document for the present application.

6. GROUNDS OF REJECTION TO BE REVIEWED UPON APPEAL -

37 CFR 41.37(c)(1)(vi)

A) Claims 1-16 and 18-22 are rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 5,638,055 (McDonald et al).

7. APPENDICES

A copy of the claims 1-16 and 18-22 involved in this appeal is attached as a claims appendix under 37 CFR 41.37(c)(1)(viii). No evidence appendix under 37 CFR 41.37(c)(1)(xi) or related proceedings appendix under 37 CFR 41.37(c)(1)(x) is required.

37 CFR 41.37(c)(1)(vii)

A) Rejection of claims 1- 16 and 18-22 under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. No. 5,638,055 (hereinafter referred to as McDonald).

Appellant argues that McDonald does not support a *prima facie* case of anticipation for claims 1-16 and 18-22 because McDonald fails to teach each of the claimed elements and/or operational relationships. With regard to the rejections applied against claims 1-16 and 18-22, it is appellants' belief that not all of the rejected claims stand or fall together. More specifically, apparatus claims 1-16, and 18, stand together. However, claims 19-22, directed to a method for operating a trunked radio repeater system, should be grouped separately from claims 1-16, and 18 for purposes of this appeal.

The test for establishing a *prima facie* case of anticipation under §102 "requires the presence in a single prior art reference of each and every element of the claimed invention, arranged as in the claim." (Lindemann Maschinenfabrik GmbH v. American Hoist and Derrick Co., 730 F.2d 1452, 221 USPQ 481,485 (Fed. Cir. 1984)). Furthermore, "there must be no difference between the claimed invention and the referenced disclosure, as viewed by a person of ordinary skill in the field of the invention." Scripps Clinic and Research Found. v. Genentech Inc., 927 F.2d 1565, 18 USPQ2d 1001, 1010 (Fed. Cir. 1991)). Absence from the reference disclosure of any claim element and/or operational interrelationship negates anticipation under §102.

#### A.1) Arguments Regarding Claim 1

The Examiner relies on McDonald to reject claim 1 under 35 U.S.C. §102. McDonald is directed to a trunked communications system configured to perform a method to enable users of the communication system to control which communication unit sources audio at any one time in a user group. See column 2, lines 43-46. McDonald discloses three modes of operation that can be utilized in the trunk radio system. The first mode of operation prohibits interruption of a user that is already talking on a channel. In a second mode of operation, the system allows any user to interrupt a person talking on a given channel to

interject comments or other information. McDonald describes the second mode of operation as being similar to a normal conversational mode in which individuals routinely interrupt each other to take control of a conversation. In a third mode of operation, McDonald describes a hierarchy system that allows the system administrator to establish priority regarding a channel being used, based upon a predefined hierarchy within the user groups. In this mode, a supervisor might have ultimate priority so that the supervisor could interrupt any other person that is talking on the given channel.

It is submitted that McDonald addresses a different problem than the one addressed by the present invention. McDonald describes priority techniques regarding the utilization of a given channel being presently used by the traditional users of a trunked radio system. The problem addressed by McDonald presumes that there is a user group that is already utilizing a given channel for communication so that if one user has control of the given channel, no one else could talk on that channel. McDonald discloses priority modes for user groups competing for a given channel that is presently being used. By way of comparison, the system of the present invention makes use of the overall channel or frequency redundancies to enable utilization by low priority users of a presently unused channel or frequency. Channel or frequency redundancies refer to the fact that the system has a higher number of channels relative to the anticipated number of simultaneous users so that at any given time some of the channels may be available. This is different from setting priority modes regarding a channel that is being presently utilized by a traditional user, as is disclosed by McDonald.

It is submitted that the Examiner's characterization of parasitic data as being analogous to an emergency transmission is incorrect. The term "parasitic data" is used by applicant throughout the specification to mean data that is allowed to use the radio system only if and when there are available free channels. It is accurate that when the system of the present invention transmits an information signal to the first plurality of receivers on an assigned frequency selected from a plurality of available frequencies, this would be a classical

function for the transmission of audio on a trunked radio system. However, McDonald does not teach or suggest structure for transmitting parasitic data to a second plurality of receivers using an unoccupied frequency. It is recognized that McDonald describes in one of the modes the ability to interrupt a frequency that is being used in order to take control of that frequency by someone having a higher priority than the present user of that system. While this feature alone may arguably sound similar regarding some aspects of applicant's claimed invention, there is nothing in McDonald that suggests that one could transmit parasitic data to a second plurality of receivers on one of the unoccupied frequencies that is likely to exist at any given time in the trunked radio system. Accordingly, it is not believed that there is any description or suggestion in McDonald that meets the structural and/or operational relationships set forth in appellant's claim 1. Anticipation under 35 U.S.C. §102 requires that "The identical invention must be shown in as complete detail as contained in the ...claim." (In re Bond, 910 F.2d 831, 15USPQ2d 1566 (Fed. Cir. 1990)). Accordingly, it is submitted that McDonald fails to anticipate or otherwise render unpatentable claim 1. Thus, the rejection of claims 1-4 under 35 U.S.C. §102(e) is not supported by the cited art and should be reversed.

#### A.2) Arguments Regarding Claim 5

With regard to independent claim 5 and any dependent claims therefrom, it is reiterated that McDonald does not describe any use of a trunked radio system for transmitting parasitic data to one or more of a plurality of parasitic receivers on an unoccupied working channel. Accordingly, it is not believed that that there is any description or suggestion in McDonald that meets the structural and/or operational relationships set forth in appellant's claim 5. All of claims 5-16 and 18 include the reference to parasitic data. Accordingly, it is submitted that McDonald fails to anticipate or otherwise render unpatentable any of the foregoing claims and reversal of the rejections is requested.



### A.3) Arguments Regarding Claim 19

In comparing the language set forth in claim 19 to what is described in McDonald, it is believed that McDonald is only directed to establishing mode priorities regarding a single channel that is being presently utilized by a user group. There is no discussion or suggestion in McDonald of either determining when a working channel is unoccupied or permitting operation by one or more of a second plurality of radios on the unoccupied working channel until the working channel is assigned for use by a first plurality of radios. Again McDonald is premised on assigning priorities regarding a channel that is being presently occupied not on the utilization of an unoccupied working channel. Therefore, determining whether a working channel is unoccupied is superfluous in McDonald whereas in the present invention this step is a fundamental determination as to permitting operation by one or more of a second plurality of radios on the unoccupied working channel. Accordingly, it is not felt that McDonald describes or suggests utilization of redundancies in a plurality of working channels so that some of the working channels can be used by a second plurality of radios so long as such channels are not required for use by a first plurality of radios. Thus, McDonald fails to meet the Section 102(e) requirements for the rejection of claim 19 and as a result the rejection of claims 19-22 under 35 U.S.C. §102(e) is not supported by McDonald and should be reversed. Appellant further submits that McDonald does not render claims 19-22 unpatentable on any other basis.

Respectfully submitted,



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CLAIMS APPENDIX  
37 CFR 41.37(c)(1)(viii)

1. A communications system for transmitting information signals to a first plurality of receivers upon request, and for transmitting parasitic data to a second plurality of receivers, said communications system comprising:

a transmitter for transmitting an information signal to at least one of the first plurality of receivers on an assigned frequency selected from among a plurality of available frequencies, in response to a request to transmit received from a user of said communications system; and

a controller coupled to said transmitter for transmitting parasitic data to at least one of the second plurality of receivers on a heretofore unoccupied frequency selected from among the plurality of available frequencies, and wherein the parasitic data transmission is interrupted if the selected frequency is required for transmitting an information signal to one of the first plurality of receivers.

2. The communications system of claim 1 wherein the parasitic data is transmitted in the form of digital data packets.

3. The communications system of claim 1 comprising a trunking system, wherein each of the first plurality of receivers includes a transmitting apparatus, and wherein a user of one of the first plurality of receivers requests a frequency assignment over which the information signal is transmitted from the requesting user to at least one other of the first plurality of receivers.

4. The communications system of claim 3 wherein the users of the first plurality of receivers provide public services.

5. A trunked radio repeater system including a trunked radio repeater and a plurality of portable radios for communicating bi-directionally with each other via said trunked radio repeater, wherein the trunked radio repeater system further includes plural working channels, said trunked radio repeater system further including a plurality of parasitic receivers operating on a secondary basis to the plurality of portable radios, said trunked radio repeater system comprising:

a first controller for receiving a request from one of the plurality of portable radios to transmit an information signal to at least one other of the plurality of portable radios, and in response thereto for assigning a working channel to carry the information signal;

a second controller responsive to said first controller for transmitting parasitic data to one or more of the plurality of parasitic receivers on an unoccupied working channel; and

when the first controller assigns a working channel that is in use transmitting parasitic data, the first controller terminating the parasitic data transmission and transmitting an information signal on the working channel.

6. The trunked radio repeater system of claim 5 wherein the working channel includes an inbound frequency for carrying the information signal inbound from the requesting portable radio to the trunked radio repeater, and includes an outbound frequency for carrying the information signal from the trunked radio repeater to one or more of the plurality of portable radios.

7. The trunked radio repeater system of claim 5 including an inbound and an outbound control channel, wherein the request to transmit is carried over said inbound control channel and wherein the first controller transmits a signal to at least one of the plurality of portable radios on said outbound control channel, and wherein said signal identifies the working channel for carrying the information signal.

8. The trunked radio repeater system of claim 5 wherein each one of the plurality of parasitic receivers includes a transmitter for transmitting a parasitic signal to the trunked radio repeater.

9. The trunked radio repeater system of claim 8 wherein a signal is transmitted from the trunked radio repeater to at least one of the plurality of parasitic receivers, wherein said signal assigns a working channel on which the parasitic receiver can transmit to the trunked radio repeater.

10. The trunked radio repeater system of claim 9, including an outbound control channel for carrying the signal assigning the working channel assignment.

11. The trunked radio repeater system of claim 9 wherein each working channel includes an inbound frequency and an outbound frequency, and wherein the inbound frequency to be used for transmitting to the trunked radio repeater from one of the plurality of parasitic receivers is the inbound frequency of the working channel on which the parasitic receiver last received parasitic data.

12. The trunked radio repeater system of claim 5 wherein the second controller transmits an outbound frequency assignment signal to at least one of the plurality of parasitic receivers, in response to which the at least one parasitic receiver tunes to the assigned outbound frequency and thereafter receives the parasitic data on the assigned outbound frequency.

13. The trunked radio repeater system of claim 5 wherein the parasitic data includes address information, wherein each one of the plurality of parasitic receivers has an address, wherein the parasitic data is transmitted to all of the plurality of parasitic receivers, but only the parasitic receiver having an address matching the address information in the parasitic data responds to the parasitic data.

14. The trunked radio repeater system of claim 5 wherein the parasitic data is transmitted in the form of digital data packets.

15. The trunked radio repeater system of claim 5 wherein the parasitic data is broadcast to all of the plurality of parasitic receivers on a predetermined channel, and wherein the parasitic data includes a header portion identifying the one or more of the plurality of parasitic receivers for which the parasitic data is intended.

16. The trunked radio repeater system of claim 5 wherein each one of the plurality of parasitic receivers scans the working channels searching for parasitic data.

17. (Cancelled)

18. The trunked radio repeater system of claim 17 wherein the termination of the parasitic data transmission before completion thereof causes the parasitic data to be stored and transmitted at a later time.

19. A method for operating a trunked radio repeater system having a control channel and plural working channels, wherein the working channels are assigned for use by one or more of a first plurality of radios as specified by a control signal carried on the control channel and assigned for use by a second plurality of radios when not in use by one of the first plurality of radios, said method comprising:

operating one or more of the first plurality of radios on one of the plural working channels in response to an assignment signal carried on the control channel;

determining when a working channel is unoccupied; and

permitting operation of one or more of the second plurality of radios on an unoccupied working channel until the working channel is assigned for use by the first plurality of radios.


20. The method of claim 19 wherein when one of the second plurality of radios is operating on a working channel and it is determined that the working channel is required by one of the first plurality of radios, terminating use of the working channel by the one of the second plurality of radios.

21. The method of claim 19 wherein operation of the second plurality of radios includes receiving parasitic data.

22. The method of claim 21 wherein in response to termination of the working channel by the one of the second plurality of radios, the information is being transmitted thereby retransmitted at a later time.

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